



Economic Impact of the Internet in Korea

Academic Seminar on Platforms and Mobile
Competition

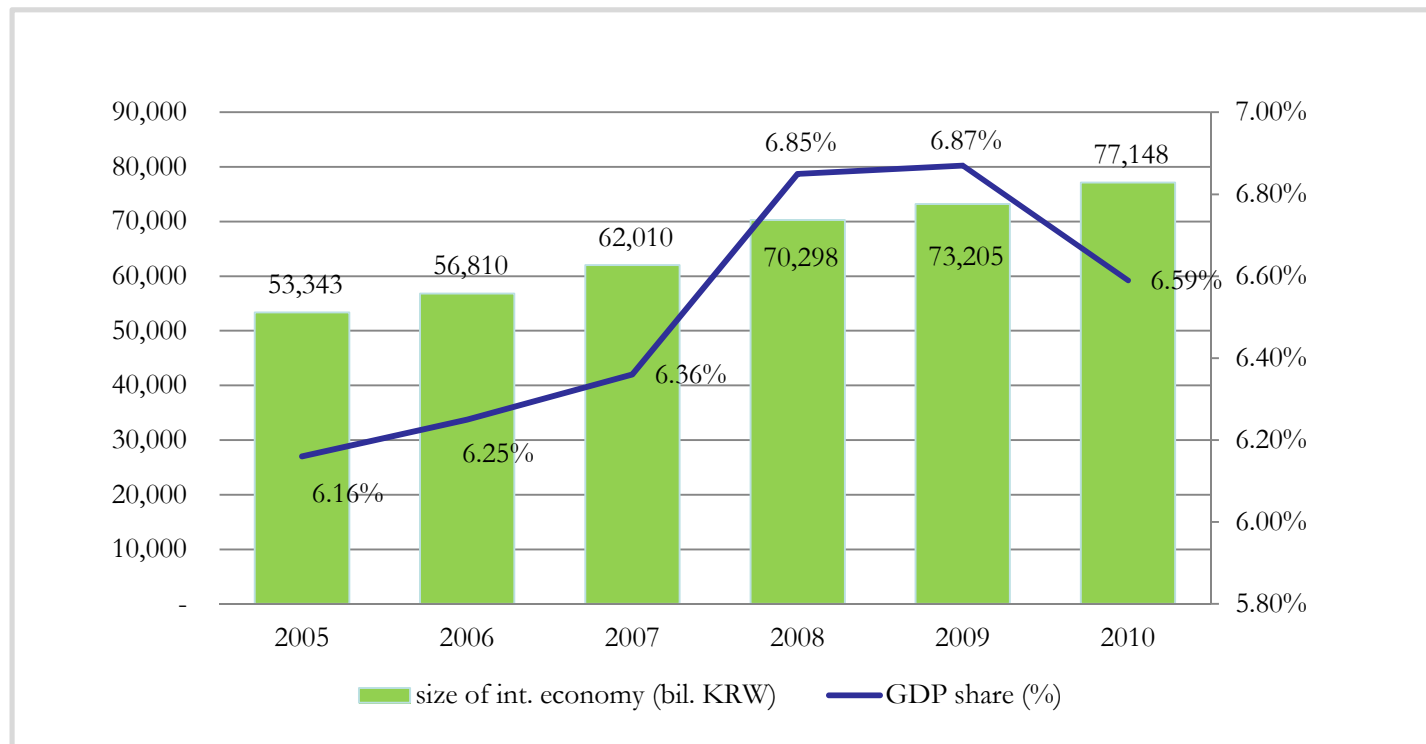
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- Excerpts from "A Study on the Economic Impacts of the Internet"(2012) by KISDI
 - Analyze the internet economy in Korea empirically and present implications for the government policy decision-making.
 - Estimate the size and effects of the internet economy with various methodologies use by OECD and other institutions.
 - size of internet economy in Korea
 - economic impacts of internet on firm performance, employment and consumer welfare.
 - Follow-up research is under way

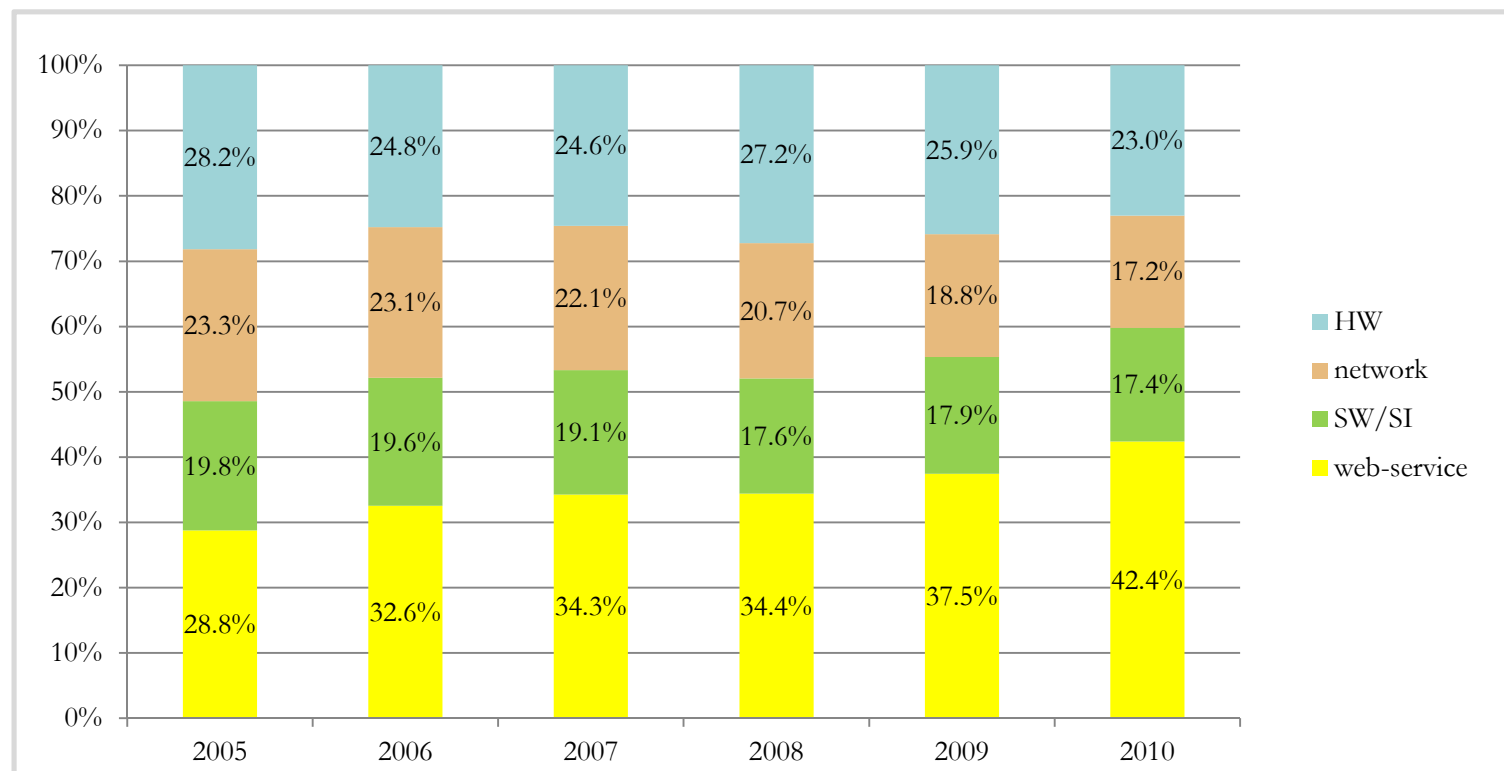
Size of Internet Economy in Korea

- Use Expenditure approach and Estimate internet expenditure in consumption, investment, government expenditure and net export.
- Internet economy growth rate from 2005 to 2010 is 44.6%, which is higher than GDP growth rate, 35%.
- Government expenditure on e-commerce is not included. GDP share is 9.2% if included



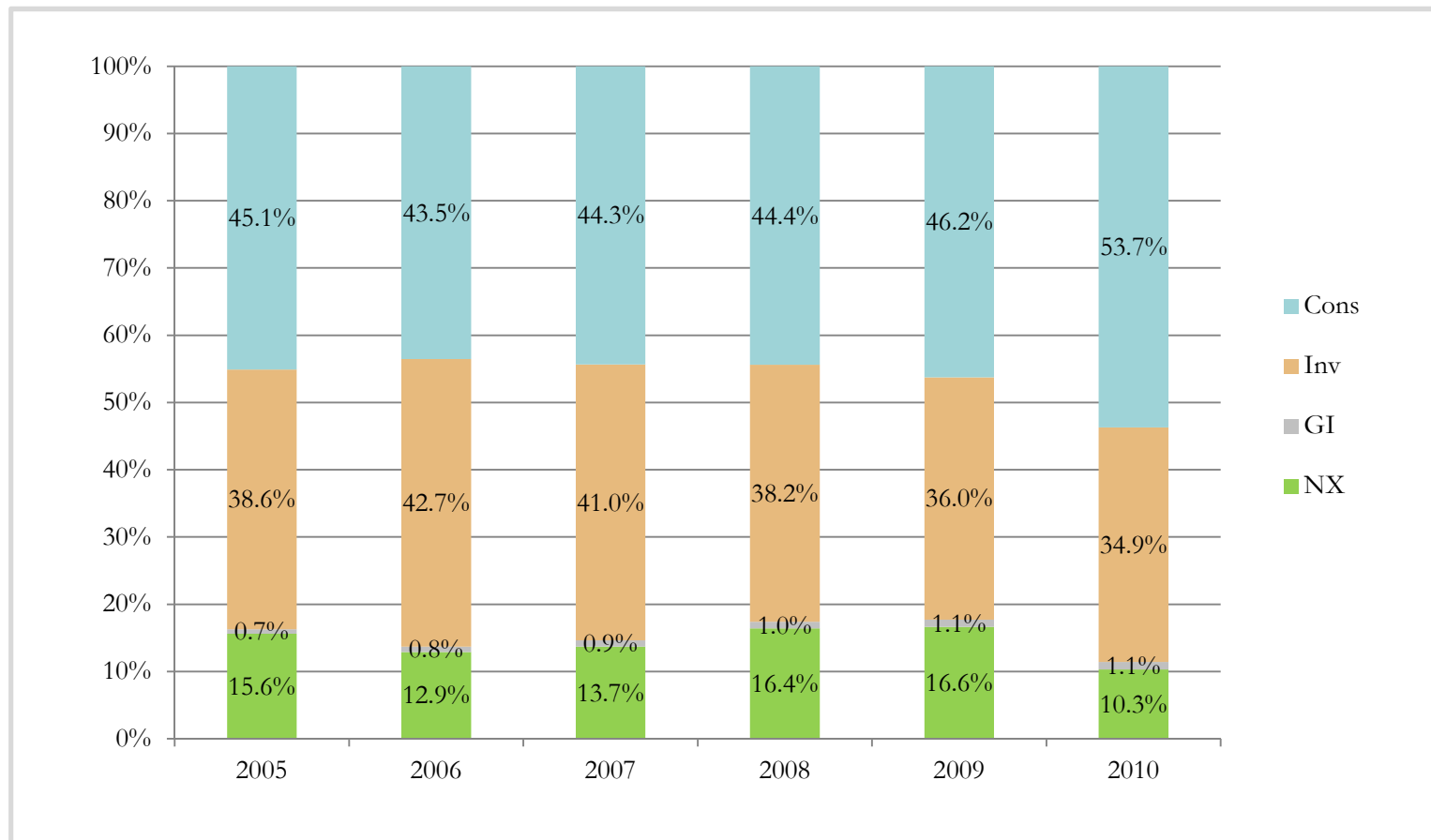
Internet economy by products/services

- Internet expenditure is composed of web-service(e-commerce, content, etc.), SW and SI, telecom network(expenditure of internet access, investment by telco), HW.
- Web-service accounts for the largest share followed by HW, SW/SI and telecom network.
- Rapid increase in web-service is due to expenditure on e-commerce and on-line contents.



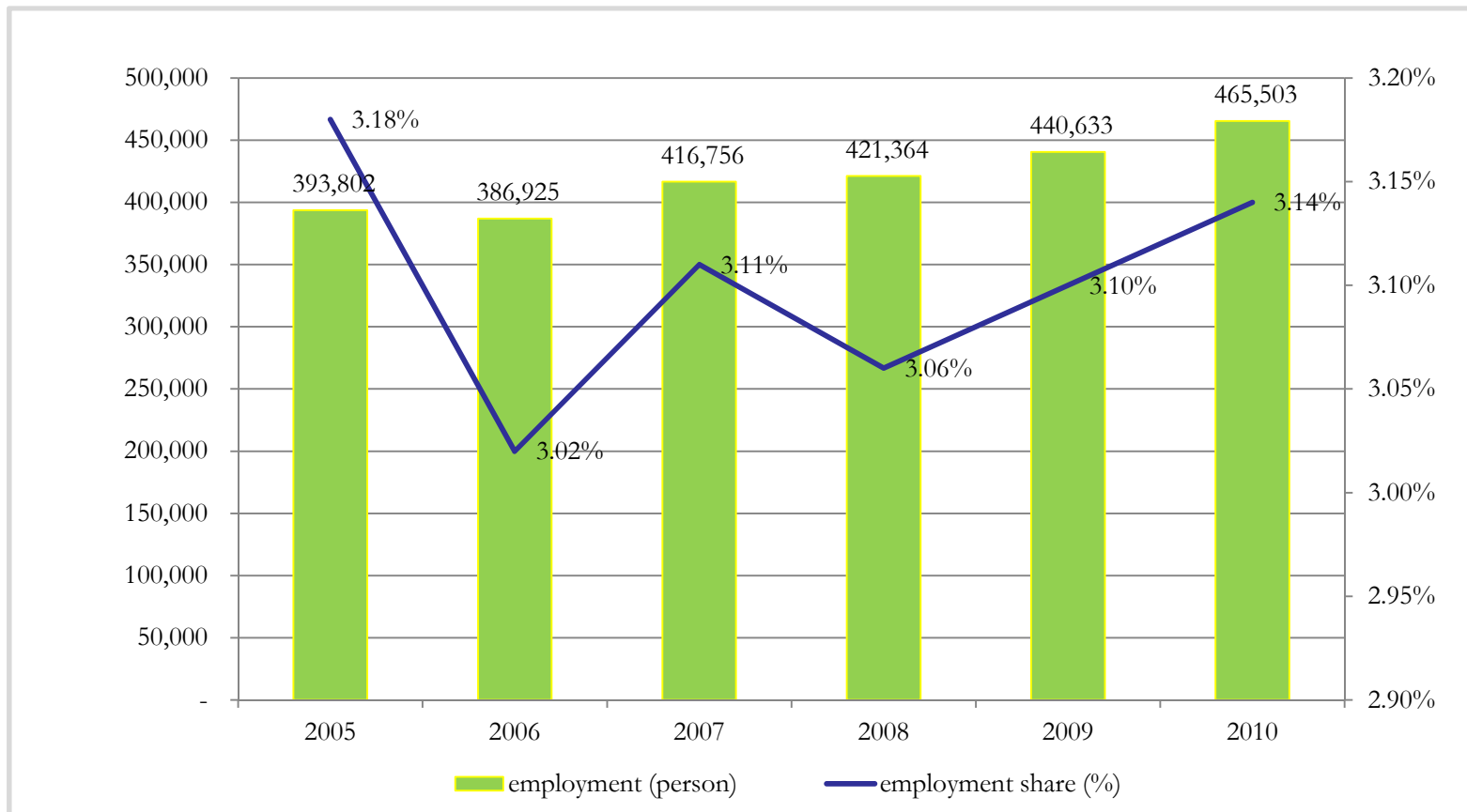
Internet economy by expenditure components

- Consumption accounts for the largest share, followed by investment, net export and government expenditure.
- And the share of consumption shows steady increase.



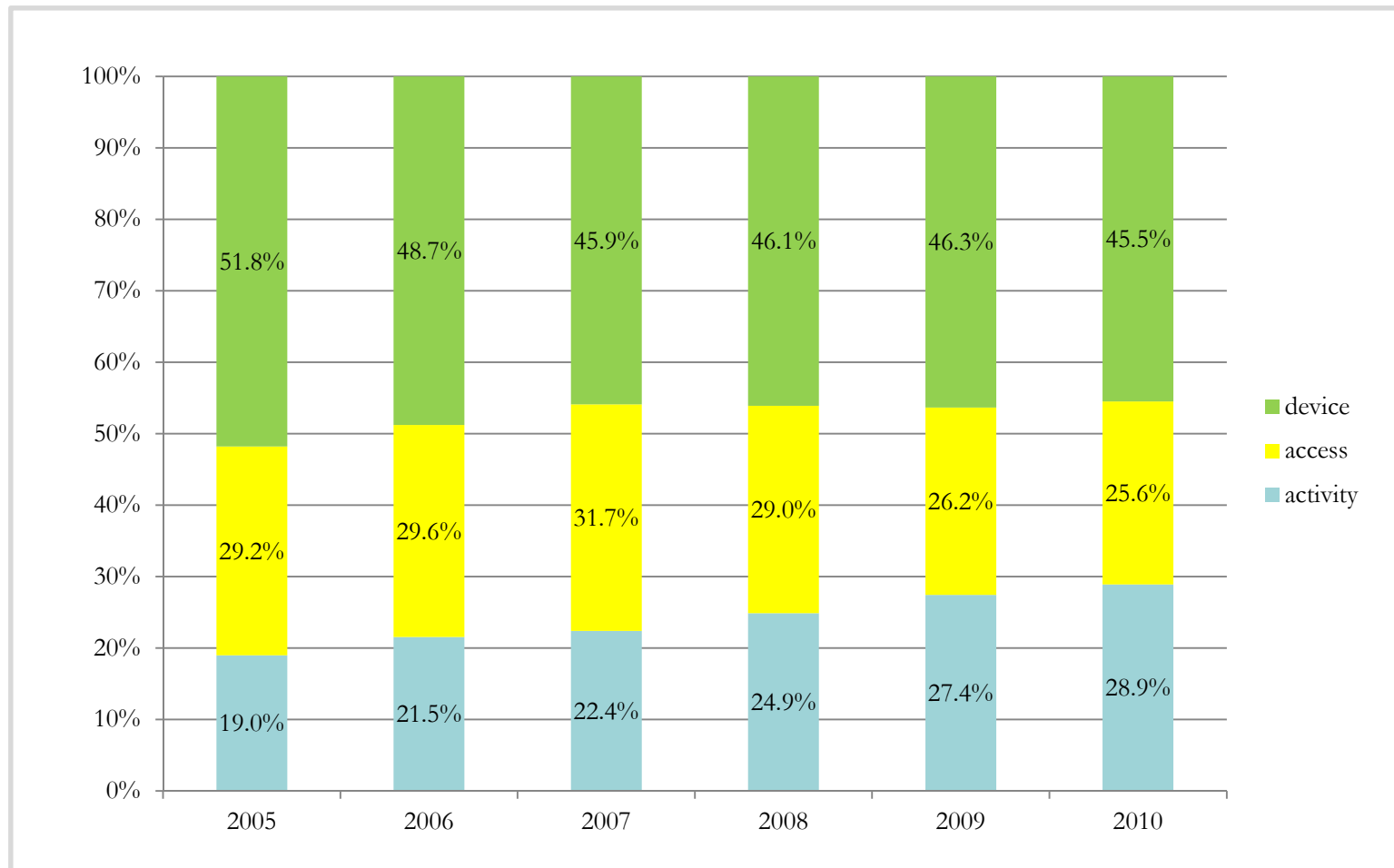
Size of employment in internet economy

- Employment in internet economy is defined as workers employed in
 - activity sector : e-commerce, internet content sector, finance sector
 - access sector : telecom sector
 - device sector : computer, HW and SW sector



Share of employment by sectors

- The share of device sector accounts for the largest share.
- But rapid increase in activity sector while decrease in device and access sectors.



Impact of internet utilization on labor productivity growth

- Firms with internet utilization realize 1.5% higher labor productivity growth rate in whole industry.
 - Similar result for manufacturing industry but impact in service industry is not statistically significant
 - Internet utilization helps cost reduction in manufacturing industry which has complex supply chain.
 - On the contrary, internet utilization in service industry increase quality of service.

	whole industry	manufacture	service
internet utilization	0.015***	0.013**	0.014
ln(no. of workers)	0.044***	0.055***	0.027***
ln(captial intensity)	0.028***	0.048***	0.016***
ln(1+no. of patent/sales)	0.06	-0.027	0.150*
ln(previous year labor productivity)	~0.209***	~0.244***	~0.174***
sample size	12,219	7,873	4,346
R-squared	0.138	0.148	0.129
*** 1%, **5%, * 10% significance level			

Impact of internet utilization on firm sale growth

- Firms with internet utilization realize 0.8% higher sales growth rate in whole industry.
 - Similar result for manufacturing industry but impact in service industry is not statistically significant.
 - Internet utilization increase the demand as well as productivity especially in manufacturing industry

	whole industry	manufacture	service
internet utilization	0.008**	0.010**	0.005
ln(no. of workers)	0.011***	0.007	0.016
ln(captial intensity)	0.003**	0.017***	-0.003
ln(1+no. of patent/sales)	0.185***	0.240***	0.112
ln(previous sale)	~0.010***	~0.014***	~0.009**
sample size	12,219	7,873	4,346
R-squared	0.073	0.098	0.05
*** 1%, **5%, * 10% significance level			

Impact of internet utilization on labor growth

- Firms with internet utilization realize 0.4% higher job creation in whole industry.
 - Similar result for manufacturing industry and service industry.
 - As the internet utilization increases, the demand for internet-related service workers (such as programmer, web-page management and network management) increase.

	whole industry	manufacture	service
internet utilization	0.014***	0.013**	0.015*
ln(no. of workers)	~0.045***	~0.057***	~0.042***
ln(captial intensity)	0.015***	0.035***	0.004
ln(1+no. of patent/sales)	~0.015	0.079	~0.015
control	industry, year, city/province	"	"
sample size	12,219	7,873	4,346
R-squared	0.041	0.053	0.039
*** 1%, **5%, * 10% significance level			